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Case study: ISG

ISG plots a critical path past sensitive residents to create a new Dorset School

Summary

Global construction and engineering services company ISG took on a sensitive project to create a new school with tight access restrictions, a historic location, and a community which was not particularly happy with the disruption it promised.

However, with the support of Powerproject, its project manager was able to plan carefully around numerous issues, enabling excellent community and client communication and ensuring that even the inevitable surprises created no significant project delays.

In doing so, he not only won a CMYA award, but clearly supported the company's ethos: to deliver places that help people and businesses thrive; delivering a Dorset school with which children, parents and the community were delighted.

When ISG won the contract from Dorset District Council to build Lulworth & Winfrith Primary School, it knew that some local community concerns were inevitable. Not only would this be the largest construction project in the village of Lulworth for many years, the village is located on a Jurassic stretch of coastline designated as a World Heritage Site. However, as the project moved forwards, these would not prove the only hurdles to overcome.

The project was to be the first time that construction manager Mark Penny took the lead project management role, in sole charge on site. His 20 years' background in engineering meant that he would always strive for 'right first time' – but, as construction leader, he now also had to strive for 'on time, on budget'. To help do that he utilised Powerproject, which would prove invaluable in helping him control the programme, communicate with the community, and cope with changes and issues. He succeeded despite several roadblocks, and was rewarded by a Gold Medal in the Construction Manager of the Year Awards.

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Tight access management

After a challenging planning phase involving four rejected locations, the team arrived on the final site to break ground – but immediately realised that they had a serious access headache. Mark explained: "The main challenge was clearly going to be one of logistics. The only access was via a narrow school lane, with residential housing on either

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side, a youth hostel next door, and an existing school to take deliveries past every day. We knew we'd need to work at getting deliveries in without causing problems for residents."

He used maximum diplomacy with the landowner, and succeeded in creating an alternative access route across the Lulworth Estate which would minimise the volume and frequency of delivery nuisance for local residents and the nearby school.

"We looked very closely at the programme in Powerproject, to identify which key activities would affect local residents and businesses most. We had one resident who opposed planning from the start, and he would actually count the lorries in and out."

Access up the school lane became particularly critical with the delivery of large elements such as the steel frame, or site accommodation. The latter required eight flatbed lorries, very tight timing of the arrival and departure of the crane. Exact timing was required – both to ensure parking restrictions were minimised for residents, and to avoid drop-off and pick-up times for parents at the nearby existing school.

Let nothing spoil progress

An unwelcome condition of planning permission had dictated that the roofline of the building must be significantly lowered. That meant that the entire site level had to be lowered by 600mm, adding an activity that would take two weeks and extra resource to remove more than 2500 cubic metres of soil off-site, effectively cutting off the site and interrupting other deliveries. Mark explained "We had to manage the timing; we decided to do it over the Easter holidays to minimise the disruption, but it couldn't run over. We had to take the initial programme and feed in the requirement to remove the soil, while keeping all the other activities going on, onsite. We also had to make sure we had enough materials on site to keep going throughout."

> **"In Powerproject we could clearly see things that we HAD to maintain progress with – so we could plan ahead."**

Keeping a crystal clear view of the critical path while this activity was going on was essential, as it would significantly delay certain activities. Mark continued: "Though the critical path itself didn't change, we looked at everything that wasn't on it that we could juggle around. We started some activities earlier to take advantage of the period when we would be confined on site. As we changed activities the software proved that it wouldn't alter items on the critical path. We prioritised getting all the external works well ahead of the schedule, while we were taking the muck away. In Powerproject we could clearly see things that we HAD to maintain progress with – so we could plan ahead and get things like all the bricks and blocks delivered earlier, so we were self-sufficient during the recontouring."

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Collaborating on every front

Mark took a highly collaborative approach overall. Being quite used to working with Powerproject, he was able to work collaboratively with the ISG planner: "Our planner would do the overall programme on Powerproject and update it weekly, but I would dissect the critical path to create short term programmes and focus right down to daily events. That mean I could juggle these activities, to hit all the main programme's critical events – such as starting the steel framing, achieving watertight deadline, and starting internal finishes."

The client's needs could be incorporated with some careful planning, using Powerproject to help communicate the implications. For example, Mark said:
"You can't show people afterwards that there was a delay. When the client wanted to double the number of solar panels, we knew it would cause a two-week delay. We sat down with the planner and showed the knock-on effect directly in the main programme. They were quite happy, and were able to use the extra time to do things like get their IT system sorted out."

> **"You can't show people afterwards that there was a delay."**

Local residents, despite their earlier concerns, seemed to relax during the project and appreciate all the effort and prior warning of disruptions. So much so that when windy weather arrived, preventing the crane lifting the site accommodation cabins safely in order to remove it, they were quite happy with the extra two days of delay, before 'normal life' could return.

All the precise planning meant that Mark was in and out of the software constantly: "I used Powerproject at least every three days, sometimes every other day, because I was conscious of the targets we had to hit every week, as well as needing to report progress in to the planner weekly and keep residents informed. It's very easy to use, although I probably don't use it to its full extent. However, I knew the critical path inside and out."

Finally, after few last-minute changes by the school itself, including a pre-opening governors' meeting held at the site, the 43-week project finished just a week after its original deadline. But, since this allowed the school's team to move a few things around, they were delighted with the end result. Mark himself was awarded a well-deserved Gold medal in the Construction Manager of the Year Awards.

The school was finally unveiled by the Lord Lieutenant of Dorset, blessed by the Bishop of Sherborne, and opened its doors to the children in August 2016.